

IN THE CLAIMS

Please amend the pending claims as follows:

1. (Currently Amended) A method ~~of authenticating a client to a communication system~~ comprising ~~the steps of~~:
 - receiving at ~~[[the]]~~ a mobile client from a mobile station a subscriber identity corresponding to a subscriber of a mobile telecommunication network, wherein the mobile telecommunication network is separate from ~~[[the]]~~ a communication system to which the mobile client is to be authenticated;
 - sending the subscriber identity from the mobile client to an authentication block of the mobile telecommunication network;
 - receiving at the mobile client from the authentication block at least one challenge and at least one first secret based on a subscriber's secret specific to the subscriber identity;
 - sending from the mobile client the at least one challenge to a subscriber identity module;
 - receiving at the mobile client at least one second secret in response to the at least one challenge; and
 - using the second secret for authenticating the mobile client.
2. (Currently Amended) The method ~~of authenticating of~~ according to claim 1 further comprising:
 - receiving a ~~PIN~~personal identification number from a user; and
 - transmitting wirelessly the ~~PIN~~personal identification number to the mobile station.
3. (Currently Amended) The method according to claim 2 further comprising:
 - encrypting the ~~PIN~~personal identification number before ~~the step of~~ transmitting the personal identification number.
4. (Currently Amended) The method according to claim 1 wherein ~~the step of~~ using the second secret further comprises:
 - encrypting the second secret to provide a encrypted second secret;
 - and

transmitting the encrypted second secret to the communication system.

5. (Currently Amended) The method according to claim 4 wherein ~~the step of using~~ the second secret further comprises:
refreshing the encrypted second secret.
6. (Currently Amended) The method according to claim 1 wherein ~~the step of sending~~ the subscriber identity to an authentication block comprises sending wirelessly the subscriber identity to the authentication block; and
~~the step of wherein~~ receiving from the authentication block comprises receiving wirelessly from the authentication block.
7. (Currently Amended) The method according to claim 1 wherein ~~the steps of:~~
receiving from a mobile station a subscriber identity comprises receiving wirelessly from a mobile station a subscriber identity;
sending the at least one challenge comprises sending wirelessly the at least one challenge; and
receiving at least one second secret comprises receiving wirelessly at least one second secret.
8. (Currently Amended) The method ~~of authenticating of~~ according to claim 7 further comprising:
receiving a ~~PIN~~ personal identification number from a user; and
transmitting wirelessly the ~~PIN~~ personal identification number to the mobile station.
9. (Currently Amended) The method ~~of authenticating of~~ according to claim 8 wherein ~~the step of~~ transmitting wirelessly comprises transmitting an infrared signal.
10. (Currently Amended) The method ~~of authenticating of~~ according to claim 8 wherein ~~the step of~~ transmitting wirelessly comprises transmitting a radio signal.

11. (Currently Amended) ~~The method of authenticating of~~according to claim 8 wherein ~~the step of~~ transmitting wirelessly comprises transmitting a low power radio signal.
12. (Currently Amended) ~~The method of authenticating of~~according to claim 8 wherein ~~the step of~~ transmitting wirelessly comprises transmitting an acoustic signal.
13. (Currently Amended) ~~An apparatus, A client able to be authenticated to a communication system, the client~~ comprising:
 - a means for receiving at ~~[[the]]~~ a mobile client from a mobile station a subscriber identity corresponding to a subscriber of a mobile telecommunication network, wherein the mobile telecommunication network is separate from ~~[[the]]~~ a communication system to which the mobile client is to be authenticated;
 - a means for sending the subscriber identity to an authentication block of the mobile telecommunication network;
 - a means for receiving at the mobile client from the authentication block at least one challenge and at least one first secret based on a subscriber's secret specific to the subscriber identity;
 - a means for sending from the mobile client the at least one challenge to a subscriber identity module; and
 - a means for receiving at the mobile client at least one second secret in response to the at least one challenge wherein the second secret is arranged to be used for authenticating the mobile client.
14. (Currently Amended) ~~The apparatus according to~~The client for authenticating of claim 13 further comprising:
 - a means for receiving a ~~PIN~~personal identification number from a user; and
 - a means for transmitting wirelessly the ~~PIN~~personal identification number to the mobile station.
15. (Canceled)
16. (Canceled)

17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)
21. (Canceled)
22. (Canceled)
23. (Canceled)
24. (Canceled)
25. (Currently Amended) A method ~~for providing at least one secret based on a subscriber identity comprising the steps of:~~
 - retrieving from a subscriber identity module in a mobile station a subscriber identity corresponding to a subscriber of a mobile telecommunication network;
 - sending wirelessly the subscriber identity from the mobile station to a mobile client for authenticating the mobile client to ~~[[the]]~~ a communication system;
 - receiving wirelessly at the mobile station from the mobile client at least one challenge based on a subscriber's secret specific to the subscriber identity;
 - generating at the mobile station at least one secret in response to the at least one challenge; and
 - sending from the mobile station wirelessly to the mobile client the at least one secret.
26. (Currently Amended) The method of claim 25 wherein the method further comprises ~~a step of~~ wirelessly receiving a request.

27. (Currently Amended) The method of claim 26 wherein the request contains a ~~PIN~~personal identification number.
28. (Currently Amended) The method of claim 27 wherein the request contains an encrypted ~~PIN~~personal identification number.
29. (Currently Amended) The method of claim 27 further comprising ~~a step of~~ confirming that the ~~PIN~~personal identification number matches a identity module ~~PIN~~personal identification number.
30. (Currently Amended) An apparatus, ~~A mobile station for providing at least one secret based on a subscriber identity~~ comprising:
means for retrieving from a subscriber identity module a subscriber identity corresponding to a subscriber of a mobile telecommunication network;
means for sending wirelessly the subscriber identity to a mobile client for authenticating the mobile client to ~~[[the]]~~ a communication system;
means for receiving wirelessly from the mobile client at least one challenge based on a subscriber's secret specific to the subscriber identity;
means for generating at least one secret in response to the at least one challenge and
means for sending wirelessly the at least one secret.
31. (Currently Amended) The ~~mobile station~~ apparatus of claim 30, further comprising a means for wirelessly receiving a request.
32. (Canceled)
33. (Canceled)
34. (Canceled)
35. (Previously Presented) A computer program product embodied in a computer readable medium for controlling a client in order to authenticate the client to a communication system by using a subscriber identity module of a mobile

telecommunications network, wherein the mobile telecommunications network is separate from the communications system to which the client is to be authenticated; the computer program product comprising:

computer executable program code to enable the client to wirelessly retrieve from a subscriber identity module of a mobile station a subscriber identity corresponding to a subscriber of a mobile telecommunications network;

computer executable program code to enable the client to wirelessly send the subscriber identity to an authentication block of the mobile telecommunications network;

computer executable program code to enable the client to wirelessly receive from the authentication block of the network at least one challenge and at least one first secret based on a subscriber's secret specific to the subscriber identity;

computer executable program code to enable the client to wirelessly send the at least one challenge to the subscriber identity module;

computer executable program code to enable the client to wirelessly receive from the mobile station at least one second secret in response to the at least one challenge; and

computer executable program code to enable the client to use the second secret for authenticating the client wherein the subscriber identity module is accessed over a local wireless link between the mobile station and the client when wirelessly retrieving the subscriber identity from the mobile station.

36. (Cancelled)

37. (Previously Presented) A computer program product embodied in a computer readable medium for controlling a device for authenticating a client to a communications system using a subscriber identity module of a mobile telecommunications network, wherein the communications system is separate from the mobile telecommunications network, the computer program product comprising:

computer executable program code to enable the device to retrieve from a subscriber identity module a subscriber identity corresponding to a subscriber of a mobile telecommunications network;

computer executable program code to enable the device to send the subscriber identity to a client over a local wireless link for authenticating the client to the communications system;

computer executable program code to enable the device to receive over the local wireless link from the client at least one challenge based on a subscriber's secret specific to the subscriber identity;

computer executable program code to enable the device to provide the at least one challenge to the subscriber identity module and receiving at least one authentication secret in response to the challenge; and

computer executable program code to enable the device to send the at least one authentication secret over the local wireless link to the client for use by the client in said authenticating the client to the communications system.

38. (New) An apparatus, comprising:

a first module for receiving at a mobile client from a mobile station a subscriber identity corresponding to a subscriber of a mobile telecommunication network, wherein the mobile telecommunication network is separate from a communication system to which the mobile client is to be authenticated;

a second module for sending the subscriber identity to an authentication block of the mobile telecommunication network;

a third module for receiving at the mobile client from the authentication block at least one challenge and at least one first secret based on a subscriber's secret specific to the subscriber identity;

a fourth module for sending from the mobile client the at least one challenge to a subscriber identity module; and

a fifth module for receiving at the mobile client at least one second secret in response to the at least one challenge, wherein the second secret is arranged to be used for authenticating the mobile client to the communication system.

39. (New) The apparatus according to claim 38, further comprising:

a user interface for receiving a personal identification number from a user;
and

a transmitter for transmitting wirelessly the personal identification number to the mobile station.

40. (New) The apparatus according to claim 39, further comprising:

a encrypter for encrypting the personal identification number before transmitting the personal identification number.

41. (New) The apparatus according to claim 38 wherein the fifth module further comprises:
 - an encrypter for encrypting the second secret to provide a encrypted second secret; and
 - a transmitter for transmitting the encrypted second secret to the communication system.
42. (New) The apparatus according to claim 38 wherein the fifth module is configured to refresh the encrypted second secret.
43. (New) The apparatus according to claim 38, further comprising a transmitter for sending wirelessly the subscriber identity to the authentication block; and
 - a receiver for receiving wirelessly from the authentication block.
44. (New) The apparatus according to claim 38, further comprising a receiver for receiving wirelessly from a mobile station a subscriber identity; and
 - a transmitter for sending wirelessly the at least one challenge;
 - wherein the receiver is configured to receive wirelessly at least one second secret.
45. (New) The apparatus according to claim 44, further comprising:
 - a user interface for receiving a personal identification number from a user;and
 - wherein the transmitter is configured to transmit wirelessly the personal identification number to the mobile station.
46. (New) The apparatus according to claim 44, wherein the transmitter is configured to transmit an infrared signal.
47. (New) The apparatus according to claim 44, wherein the transmitter is configured to transmit a radio signal.

48. (New) The apparatus according to claim 44, wherein the transmitter is configured to transmit a low power radio signal.
49. (New) The apparatus according to claim 44, wherein the transmitter is configured to transmit an acoustic signal.
50. (New) An apparatus, comprising:
 - a first module for retrieving from a subscriber identity module a subscriber identity corresponding to a subscriber of a mobile telecommunication network;
 - a second module for sending wirelessly the subscriber identity to a mobile client for authenticating the client to a communication system;
 - a third module for receiving wirelessly from the mobile client at least one challenge based on a subscriber's secret specific to the subscriber identity;
 - a fourth module for generating at least one secret in response to the at least one challenge; and
 - a fifth module for sending wirelessly the at least one secret.
51. (New) The apparatus of claim 50, further comprising a receiver for wirelessly receiving a request.
52. (New) The apparatus of claim 51 wherein the request contains a personal identification number.
53. (New) The apparatus of claim 52 wherein the request contains an encrypted personal identification number.
54. (New) The apparatus of claim 52, further comprising a comparator for confirming that the personal identification number matches a identity module personal identification number.